

REMARKS

Claims 1-5 and 7-21 are pending. By this Amendment, claims 1, 11, 12 and 17 are amended, claim 6 is canceled without prejudice to or disclaimer of the subject matter recited therein, and claims 19-21 are added. No new matter is added. Reconsideration of the application is respectfully requested.

Applicant notes with appreciation the allowance of claims 12 and 13. Claim 12 is amended to correct an informality.

That is, claim 12 is amended to recite that at least one second opening is formed in a part of the second resin film where the second wiring film is disposed, and that the second flexible wiring board comprises a base film and a wire on the base film. Because the Office Action states that the reasons for the indication of allowable subject matter for claim 12 is the limitation "a first bump is arranged in the first opening, the wire of the second flexible wiring board is connected to the first wiring film by the first bump, a second bump is arranged in the second opening, the wire of the second flexible wiring board is connected to the second wiring film by the second bump," Applicant believes that claim 12 as amended is still patentably distinct from the applied art and therefore remains allowable.

Claim 17 is amended to correct punctuation. The amendment has no bearing on patentability.

The Office Action rejects claims 1-11 and 14-18 under 35 U.S.C. §102(b) over U.S. Patent No. 4,816,323 to Inoue. This rejection is respectfully traversed.

Claim 1 recites, *inter alia*, a bottom face of the lower part of the first wiring film embedding into the first resin film is in contact with the first resin film.

For the etched metal foil 11 shown in Fig. 1d of this application, a resin liquid is applied on the etched part and the non-etched part of the metal foil 11, so as to form a first resin film 17 (Applicant's specification page 8, lines 18-25, for example). A part of the non-

etched part of the metal foil 11 is embedded into the first resin film 17. The resin liquid forming the first resin film 17 is in contact with the non-etched part of the metal foil 11. As shown in Figs. 2g and 2f, for example, the non-etched part of the metal foil 11 forms the first wiring film 21. Thus, a bottom face of a part of the first wiring film 21 embedded into the first resin 17 is in contact with the first resin 17 as shown in Fig. 2g.

A thickness of the first wiring film is greater than the thickness of the second wiring film, and the electrical resistance of the first wiring film is smaller than that of the second film because of a large sectional area of the first wiring film (Applicant's specification page 13, lines 2-5, page 16, lines 5-8, for example). Therefore, a current flows through the first and the second wiring film along an extended direction but not a film thickness direction, and the extended direction is perpendicular to the film thickness direction.

A flexible wiring board of Inoue has via-holes 27 (col. 2, lines 24-25 of Inoue), which the Office Action alleges to correspond to the recited first wiring film. Although, a bottom face of the via-hole 27 is embedded into the insulating layer 24, a bottom face of a lower part of the via-hole 27 of Inoue is not in contact with the insulating layer 24 and the electric current flowing direction is different from Applicant's invention.

Inoue discloses that a thin film wiring layer 25 is connected to the through-hole wiring 22 via pad 23 (col. 2, lines 23-24 of Inoue).

As shown in Fig. 1 of Inoue, the through-hole wiring 22 is arranged on lower layer than the thin film wiring layer 25. Fig. 1 of Inoue shows that the via-hole 27 is arranged between pad 23 and the thin film wiring layer 25. Fig. 1 of Inoue further shows that the upper part of the via-hole 27 is in contact with the thin film wiring layer 25, and the lower part of the via-hole 27 is in contact with the pad 23. Therefore the electric current flows through the via-hole 27 along with the film thickness direction, when the electric current flows between the thin film wiring layer 25 and the through-hole wiring 22.

As described above, the via-hole 27 connects thin film wiring layer 25 and through-hole wiring 22, therefore the bottom face of the lower part of the via-hole 27 cannot be in contact with the insulating layer.

Accordingly, Applicant respectfully submits that Inoue does not anticipate the features of claim 1. Further, for the reasons discussed Inoue doesn't suggest the invention. As such, claim 1 is patentably distinct from Inoue.

Independent claim 11 recites that the bottom face of the thick part is in contact with the first resin film. Similar to claim 1, Inoue does not teach or suggest this feature. As such, Applicant respectfully submits that claim 11 is patentably distinct from Inoue.

Dependent claims 2-10 and 14-18 are allowable at least for their dependence on allowable base claims, as well as for the additional features they recite.


At least for the reasons described above, Applicant respectfully requests withdrawal of the rejection.

Claims 19-21 are added by this Amendment. The features recited in claims 19-21 are supported by the specification and drawings of the application.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-5 and 7-21 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Petition for Extension of Time

Date: April 13, 2006

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